Technical Data Sheet

BV510 Mouse Anti-Human CD127

Product Information

| Material Number: | 563086 |
|------------------|---|
| Alternate Name: | IL-7R; IL7R; IL7RA; IL-7Rα; IL-7R-alpha; Interleukin-7 Receptor alpha |
| Size: | 50 tests |
| Vol. per Test: | 5 µl |
| Clone: | HIL-7R-M21 |
| Immunogen: | Recombinant Human IL-7R |
| Isotype: | Mouse IgG1, ĸ |
| Reactivity: | QC Testing: Human |
| Storage Buffer: | Aqueous buffered solution containing BSA and ≤0.09% sodium azide. |
| | |

Description

The hIL-7R-M21 monoclonal antibody specifically binds to the 60-90 kDa glycoprotein, CD127. CD127 is also known as the IL-7 receptor alpha (IL-7R α) subunit. The IL-7 receptor complex is a heterodimer composed of CD127 and the common gamma chain (γ c, CD132), shared by other cytokine receptors (IL-2R, IL-4R, IL-9R, IL-15R, and IL-21R). CD127 is expressed on thymocytes, T- and B-cell progenitors, mature T cells, and some lymphoid and myeloid cells. In vitro experiments show the expression of CD127 is down-regulated following T cell activation. Studies indicate that the IL-7 Receptor plays an important role in the proliferation and differentiation of mature T cells. Recently, it has been shown that low surface expression of CD127, in combination with intermediate to high surface expression of CD25, the α chain of the IL-2 receptor complex, can distinguish between human regulatory and conventional CD4+ T cells in human adult and cord blood, lymph nodes and thymus.

The antibody was conjugated to BD Horizon[™] BV510 which is part of the BD Horizon[™] Brilliant Violet[™] family of dyes. With an Ex Max of 405-nm and Em Max at 510-nm, BD Horizon[™] BV510 can be excited by the violet laser and detected in the BD Horizon[™] V500 (525/50-nm) filter set. BD Horizon[™] BV510 conjugates are useful for the detection of dim markers off the violet laser.



Flow cytometric analysis of CD127 (IL-7Ra) expression on human peripheral blood leucocytes. Whole blood was stained with BD Horizon™ BV510 Mouse Anti-Human CD127 antibody (Cat. No. 563086; solid line histogram) or with a BD Horizon™ BV510 Mouse IgG1, k Isotype Control (Cat. No. 562946; dashed line histogram). The erythrocytes were lysed with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of viable lymphocytes. Flow cytometric analysis was performed using a BD™ LSR II Flow Cytometer System.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon[™] BV510 under optimum conditions, and unconjugated antibody and free BD Horizon[™] BV510 were removed.

Application Notes

| Application | | | | | | |
|---|--|--|---|--|--|-----|
| Flow cytometry Routinely Tested | | | | | | |
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Suggested Companion Products

| Catalog Number | Name | Size | Clone |
|----------------|-------------------------------------|--------|--------|
| 554656 | Stain Buffer (FBS) | 500 ml | (none) |
| 562946 | BV510 Mouse IgG1, k Isotype Control | 50 µg | X40 |
| 555899 | Lysing Buffer | 100 ml | (none) |

Product Notices

- This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1×10^{6} cells in a 100-µl experimental 1. sample (a test).
- 2. An isotype control should be used at the same concentration as the antibody of interest.
- Brilliant Violet[™] 510 is a trademark of Sirigen. 3
- This product may be covered by US Patent No. 5,543,320. 4.
- 5. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before 6. discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
- Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols. 8.

References

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Goodwin RG, Friend D, Ziegler SF et al. Cloning of the human and murine interleukin-7 receptors: demonstration of a soluble form and homology to a new receptor superfamily. Cell. 1990; 60(6):941-951. (Biology)

Hofmeister R, Khaled AR, Benbernou N, Rajnavolgyi E, Muegge K, Durum SK. Interleukin-7: physiological roles and mechanisms of action. Cytokine Growth Factor Rev. 1999; 10(1):41-60. (Biology)

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